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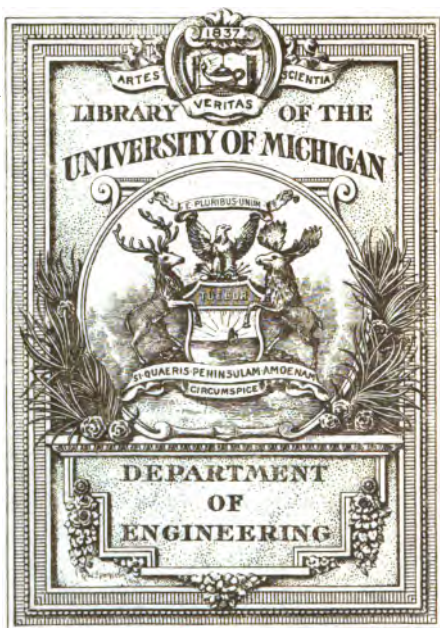
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THE ATTACK IN TRENCH WARFARE

BY

CAPT. ANDRÉ LAFFARGUE

153D INFANTRY, FRENCH ARMY

Translated by an Officer of Infantry



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Exclara 2.

INTRODUCTION

It is probable that no book on any military topic published since the outbreak of the present war has excited an interest and comment in European military circles equal to that produced by the publication of Captain Laffargue's *Etude sur l'attaque dans la periode actuelle de la guerre*. It is, in fact, the first publication from the pen of a military man dealing with the general and detailed aspects of the tactics of the attack in trench warfare, that has come to our attention.

The methods of training of infantry units for this class of warfare and the degree of careful preparation necessary for the attainment of any measure of success are among the most important features of Captain Laffargue's study. The comparison which he makes between the conduct in battle of two regiments of very different quality, brings out very clearly the difference between real infantry and the cannon-fodder

variety which is too often considered adequate for war purposes.

The fact that this study was so highly thought of by General Joffre that he caused it to be published to the French Army before it was given out for general publication, speaks for its excellence more eloquently than any commendation which could otherwise be bestowed upon it.

G. A. LYNCH, Captain, Infantry,
Editor of the *Infantry Journal*.

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THE ATTACK IN TRENCH WARFARE

I

CHARACTER OF THE PRESENT ATTACK

THE attack at the present period has become one of siege warfare. We must accept it as it is, study it, tax our wits to find special means to prepare effectively for it and to orient the instruction of troops entirely with this in view.

The attack on all points of our front consists in breaking through several lines of defense upon a depth of about three kilometers and in preventing the enemy from holding on further back on new lines already prepared or merely improvised.

The attack is therefore an immense, unlimited, simultaneous assault on all points of the front of attack, furiously pushed straight to the front until all the enemy's defenses are broken through.

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The characteristic of this attack is that it is not progressive but is an assault of a single rush; it must be accomplished in one day, as otherwise the enemy reforms, and the defense, with terrible engines of sudden destruction, will later recover its supremacy over the attack, which cannot quickly enough regain the mastery of this consuming fire. The whole series of frightful defenses cannot be nibbled at successively; they must be swallowed whole at one stroke with one decision.

Therefore, the fight is an unlimited assault. In order to attempt the assault, what is necessary?

Assaulting troops—and all troops are far from being assaulting troops.

An overwhelming superiority of fire all the time and not only at the moment of assault.

The possibility of rushing forth from a line of shelter a short distance from the enemy, a condition equally to be sought for in any other phase of the combat.

In order that the assault may be unlimited, the sacrifice being resolved upon, it must be pushed through to a finish and the enemy drowned under successive waves, *calculating, however, that infantry units*

disappear in the furnace of fire like handfuls of straw.

Is it possible to pierce the enemy's lines? I firmly believe so since the 9th of May.¹ But before that, this hypothesis seemed to me a mad temerity. I had taken part in the Battle of Nancy and in the Battle of Ypres, where it appears that the Germans, after a terrifying deluge of heavy projectiles during interminable days, tried to break through us, which I certainly did not think possible seeing the paltry and easily shattered efforts of their infantry. In considering the forces put into action which did not succeed in making us yield a foot, I believed in the inviolability of the lines of defense. On the 9th of May, by a single dash, our first wave submerged in one hour all the enemy's first-line defenses to a depth of several kilometers.

The assault is extremely murderous; it is an implacable struggle in which one or the other must fall and in which the engines of combat not destroyed beforehand often make terrible havoc in the ranks of unprotected assaulting troops.

He who risks his life and does not wish

¹The great French offensive on Neuville-Saint-Vaast north of Arras.—TRANSLATOR.

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to die but to succeed, becomes at times ingenious. That is why I, who was part of the human canister for more than nine months, have set about to consider the means of saving the inestimable existence of so many humble comrades, or at least to figure out how the sacrifice of their lives may result in victory.

II

PREPARATION OF THE ATTACK

FORMS OF THE GERMAN DEFENSIVE ORGANIZATIONS

THE German defensive organizations, as well as I have been able to establish, appear to be in general as follows:¹

1. A continuous line of trenches over the whole front, comprising on a limited depth two or three trenches, joined by numerous communicating trenches (*boyaux*), and separated by 100 to 300 meters, each one often protected by a wire entanglement.

2. Centers of resistance, comprising large villages, woods, or immense field works, consisting of a network of trenches which are very strongly organized and in which machine guns under cupolas as well as pieces of artillery are mounted.

Such are, for example, the Labyrinth and

¹ See Plate II.

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Ouvrages Blancs of Neuville. These centers of resistance are separated by intervals of 800 to 1500 meters; they mutually flank each other, and their intervals are generally guarded by closed works.

3. A second line of defense, which is not always continuous.

PREPARATION BY THE ARTILLERY

In order to attack with minimum loss, the infantry requires that the artillery in its preparation carry through the following program:

- (a) *Destroy the wire entanglements.*
- (b) *Neutralize or destroy the defenders of the trenches.*
- (c) *Prevent the artillery from coming into action.*
- (d) *Prevent the bringing up of reserves.*
- (e) *Destroy the machine guns as soon as they reveal their positions.*

(a) *Destruction of the Wire Entanglement*

The 75 produces sufficient breaches in the wire entanglements for infantry to get through; in order to accomplish this, each piece remains laid on the same point of the entanglement. But the infantry should not expect the complete and continuous de-

struction of the entanglement; that would require too many projectiles.

(b) Neutralization or Destruction of the Defenders of the Trenches

The Germans, whenever they can, dig very deep and well-protected shelters, in the interior of which they crowd themselves. The 75 has no effect on these shelters, and the infantry of the attack, who are delighted to see the parapets, the sand bags, planks, posts, etc., fly into the air as if pulverized by the ripping detonations, are stupefied on finding themselves greeted by a heavy fire as soon as they start out of their trenches. In consequence of this, the infantry is convinced that whenever the enemy has been able to construct deep shelters, an assault is certain massacre, in spite of the prodigious expenditure of 75's, unless other and more powerful means of destruction have been employed.

The aerial torpedo, on the contrary, seems to produce terrifying effects on the defenders of the trenches; it has also considerable destructive effect. This power is not always sufficient to break in the shelter caverns, but it completely knocks to pieces the firing trenches, produces cave-ins, blocks

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the openings of the shelters, and thus walls in the occupants. By its formidable explosion, the extraordinary effects of its blast, and the concussion that it induces in the ground, it annihilates all energy in the defenders, who at every instant think their last minute has come.

In the sector of attack of my company on the 9th of May, a portion of the trenches in front of the 3d and 4th Sections was severely pounded by the fire of the 75 and especially by the aerial torpedoes, while the remainder of the trenches in front of the 1st and 2d Sections suffered only from the preparation by the 75. The difference was remarkable. The 1st and 2d Sections, hardly out of their parallel, saw the enemy rise up and melted away under his suddenly opened rifle fire, and especially under that of a machine gun, while the 4th Section reached the German trench, crossed it without hindrance, and continued on its way. As for the 3d Section, it had been received by only a few shots and had crossed the first trench in one rush, when it received some shots in the back. Returning to the rear, the men found several dozen Germans crouching in the deep shelters, absolutely all in and crying for mercy.

The cannonade had ceased, and in spite of the violent fusillade cracking outside announcing an attack, they had not budged. Only a few had the courage to shoot in the back from an opening the French soldiers who passed close by.

Conversations with numerous infantry officers have definitely convinced me that the heaviest bombardment by 75's alone is ineffective against trenches organized during a long period. The heavy artillery has too much dispersion, while the aerial torpedo, besides its considerable destructive and demoralizing effects, is very accurate.

Thus the preparation on the zone of the first trenches may be made largely by means of aerial torpedoes. But it is necessary that the torpedo guns be placed close together in a continuous line (at least one to every 100 meters of trenches) and that each one have its zone clearly defined.

At Arras, these guns were not very numerous, and their preparation was consequently only partial; in trying to pound several lines of trenches at the same time, large spaces remained outside the effects of their action, while certain corners were entirely demolished.

In the artillery depots, very numerous gun

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crews should be organized beforehand for the torpedo guns, and not, date only from the day before and be at their first try out, as at Arras.

The aerial torpedo, terrorizing the defenders in the interior of their shelters, already neutralizes them in part; but the best plan of eliminating the enemy is to destroy him. In order to destroy him, it is necessary to force him to expose himself, to oblige him to come out to become the prey of the iron hail. For this there are several means:

Have the infantry advance during the preparation by the artillery;

Simulate the attack.

Finally a third method that can be transferred from the domain of fox hunting to that of the war with Germany: smoke him out.

The first plan is not applicable from first trenches, as they are too near the enemy; we shall speak of this again.

In order to simulate an attack, interrupt the artillery fire suddenly and *open rifle fire with a great deal of shouting*; the enemy hurries out immediately to his combat positions; after several minutes' waiting, a violent rafale of 75. This is what we did from time to time when we wished to

for make the Germans come out into their
rom trenches so that we could demolish some of
out, them by artillery fire. At Arras, there was
a brusque interruption of artillery fire
and- for ten minutes, but it was an absolute and
ady impressive silence. The Germans were not
plan misled by it, and when the interruption
im. for the real attack came with its fusillade
to. and noise, they manned their trenches to
aim meet it.

on As a third scheme *we have suffocating gren-*
ades and cartridges, which irritate the eyes
he and produce tears and render the neighbor-
hood of the spot where they fall untenable
for several minutes. We could also have
s- projectiles of larger dimensions, containing
to materials giving off heavy, suffocating gas.
m Thus this gas would creep over the ground,
fall into the bottom of the trenches, and
st enter the shelters, driving out the occupants,
v; who would then come under the fire of the
high-explosive shells. This gas, being,
st moreover, only suffocating, would after-
le wards have the advantage of not incom-
y moding our soldiers in their trench or during
t the attack.

While the heavy artillery may be replaced
e very advantageously by torpedoes for the
o preparation on the continuous line of

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trenches, it may be employed effectively against the centers of resistance, where its more concentrated effects will not produce the simply superficial disorganization of the 75, which leaves the cupolas of the machine gun intact.

The most important part to destroy in the centers of resistance *are the edges*, for the attack breaks through easily enough in the intermediate spaces but immediately comes under flanking fire. Moreover, a center of resistance whose borders are disorganized, becomes a harmless island, the attack of which by main strength would be terribly costly; for instance, the Labyrinth, Neuville-Saint-Vaast, Carency, which were passed by in less than an hour by groups arriving at the Cemetery of Neuville, at the La Folie Woods, and at the first houses of Souchez. *Therefore try especially to neutralize the borders* by concentrating on them the fire of batteries suitably placed with a view to following the attack on the interval. If one could put a *veil over the centers of resistance* to isolate them and obstruct the view of the flanking works, the problem would be partly solved. It would then be necessary to have projectiles giving off large quantities of heavy smoke, which

would spread out over the ground and dissipate very slowly.

The intermediate works in the intervals are easy to take because of their small dimensions. On the 9th of May, they were generally found knocked to pieces.

(c) Preparation against Artillery

The infantry urgently demands that the hostile artillery be put out of action before the attack. If the enemy artillery gets into action, the troops, crowded into the trenches, *boyaux*,¹ and parallels, have to suffer a painful bombardment, which causes losses and obliges everyone to hunt cover—an inauspicious attitude for troops which will have shortly to rush forward. Communications become difficult, the telephone connections are broken, everyone gets nervous and perturbed. On the attack proper, artillery fire has an extraordinary disturbing effect; the bullets of the rifles and machine guns cause disorder by the sudden and serious losses they occasion, but the shells spread confusion almost solely by the sight and the crash of explosions. On the 9th of May we hardly received any shells at all, not one

¹Communicating trenches.

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during the attack itself, and this contributed in a large degree to the magnificent *élan* of the first attacking waves.

At Langemarck, on the contrary, in a night attack on the trenches on the 4th of December, the unsilenced hostile artillery bombarded our trenches of departure, and I had my second section dispersed through being saluted by a rafale of shrapnel that had put the chief of section and the file-closers *hors de combat*.

In order to silence the hostile artillery, it seems that, knowing the probable emplacement of the batteries, it would be necessary suddenly and without warning to let loose on them a deluge of fire. The personnel of these batteries not being continually at their firing positions, this sudden tempest would surprise them and keep them inside their shelters. In the midst of the confusion, the fire of the batteries which try to get into action is much disturbed, impeded, and frequently interrupted. On the 9th of May the hostile artillery must have been completely surprised and literally stupefied during the whole morning, for they abandoned their infantry. Only a few pieces fired some hasty shots.

In order to render the emplacement of

the batteries completely untenable, they might be overwhelmed with shells giving off clouds of smoke and also asphyxiating shells; by this means the cannoneers would be obliged to quit their pieces or serve them under extremely difficult conditions.

The aviators hovering over the hostile lines could complete the preparation by indicating by means of luminous balls to the batteries on watch the hostile batteries not yet silenced or which have come into action.

(d) Preparation against Reinforcements and Reserves

In the second and third trenches, the garrison does not generally occupy its firing positions; it is obliged to get to them in case of attack. As long as the artillery preparation lasts, it does not budge from the shelters; but as soon as the artillery ceases its fire, the garrison hastily mans the positions. It is necessary then for the artillery to extend its fire to the second and third lines and to continue this fire while the infantry rushes the first line. The approach trenches and their junctions should especially be swept. This has, moreover, the advantage of keeping crouched in their holes

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the defenders of the first line, who are not reassured by sensing the compact sheaves of the terrible explosive passing close over their heads. The preparation on the second line of defense is absolutely identical.

It is next necessary to cut the battlefield in two and isolate the zone of the first and second lines of defense, constantly manned by the troops near their combat positions, from the zone of cantonment. It is a matter of establishing an insuperable barrier. A barrier solely of ordinary shell fire is extremely expensive. The Germans have more simply solved the question by establishing a barrier of asphyxiating gas. They employed this extremely effective scheme, it seems, at Bagatelle in the Argonne, on the 30th of June and the 1st and 2d of July.

The bombardment of the cantonment by long-range heavy guns throws disorder among the troops who are at rest. Suddenly surprised in the most profound quietude, the alarm causes all the more flurry and demoralization. Obligated to follow roads sprinkled here and there with fragments, they thus arrive diminished in number on the field of battle.

(e) Destruction of Machine Guns

The weapon which inflicts the heaviest losses on infantry is the machine gun, which uncovers itself suddenly and in a few seconds lays out the assailants by ranks. It is therefore absolutely necessary to destroy them before the attack or have the means of putting them out of action as soon as they disclose themselves.

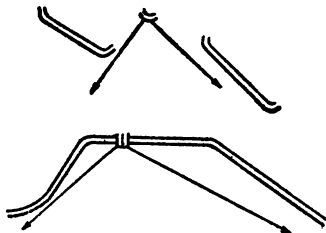
During the days which precede the attack, a minute study of the hostile trenches should be made by the infantry officers who have to attack them, in concert with the artillery officers who pound the same trenches; their study should bear especially upon the emplacements of the hostile machine guns.

The machine-gun emplacements are recognized in the continuous trenches by the low horizontal loopholes much larger than ordinary loopholes. They are generally quite easily recognized. Occasionally the machine guns are in a little separate work which is quite characteristic.

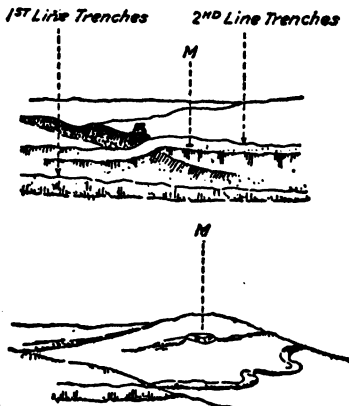
Even when they cannot be directly observed, machine-gun emplacements should be presupposed in locations such as the following:

1. In a re-entrant in the line.

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2. On the second line, particularly when it represents an elevated position permitting a tier of fire over the first line.



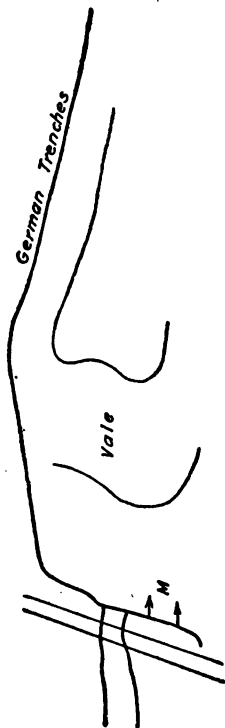
3. Squarely in front to obtain a flanking fire; in this case, they are found in a small *boyau* (branch trench) which leaves the principal trench, and it is very difficult to see them from the front.

Thus, in front of La Targette, in studying the position in profile and having moved considerably toward the right for that purpose, I discovered a machine-gun emplacement which completely enfiladed the front of the German trenches for 600 meters.

One generally believes he recognizes a very large number of machine-gun emplacements; but it is of infinitely more value to mark the position of too many than to overlook one of them; moreover, the Germans have in their defensive organization an unsuspected number of them.

Means of Destroying the Machine Guns.—Machine Guns of the Trenches.—In the course of preparation by artillery, a very distinct part of the program is reserved for the destruction of the machine-gun nests. The destruction of the machine guns should not be commenced as soon as they have been located, that is to say, often several days before the final preparations, for the enemy would have ample time to shift them. The 75 is employed to destroy the machine guns.

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Unfortunately, on account of the dispersion, it does not perfectly fulfill its role; its shots often fall to one side and a great number of them are often necessary to find exactly the small space that holds the machine gun.

I recollect that before the attack of May 9, I fretted with impatience and went continually to find the artillery observer, as I saw an accursed rectangular loophole obstinately remain intact up to the end. When we started forward, fire burst out from this loophole, and two sections were wiped out.

To destroy these machine guns, there would be needed not only cannons placed at 1500 meters, which have many other tasks, but cannons placed in the trench itself. The *mountain 80* seems to realize the desired conditions of effectiveness and mobility. Hidden in the trench before the preparation, it unmask itself during that operation; it takes under direct fire like a rifle all the machine-gun shelters successively, occupying itself with those alone and not leaving them until they are all completely out of action.

Destruction of Machine Guns that May be Set up Outside the Trenches.—On the 9th of May the survivors of my company and of the adjoining company, about eighty

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men, arrived at 11 o'clock¹ about 200 meters from the cemetery of Neuville-Saint-Vaast. The cemetery being unoccupied, the field of battle seemed void of Germans. In the distance, the batteries were fleeing. Two machine guns remained in the mill; this was the only resistance over an immense space, but it was sufficient. Impossible for my men to advance; we signal the fact with difficulty to the artillery, which from this time on is under open field conditions; it opens fire a long time afterwards and mistakes the objective. Then before the eyes of our furious men, abandoned by all because they were too far to the front, the cemetery fills up with Germans. Four hours afterwards, the 146th appears on the field and is mowed down by the machine guns; the next day the 229th succeeds it; new repetition with a slight and extremely costly advance.

With these machine guns revealing themselves thus without our being able to foresee their emplacement, and taking up positions to stop our progress in a region no longer familiar to us, we must have the means of suppressing them instantly. The

¹The assault commenced at 10 o'clock.—TRANSLATOR.

field artillery is too far away; communication hardly exists after passing beyond the extremity of the telephone lines. The question is of the greatest importance and merits study. It would be absolutely necessary that the first waves of attack be followed, after the taking of the first line trenches, by light guns, the 37 for example, drawn by their cannoneers. These independent crews would be all eyes and ears to discover the machine guns and destroy them immediately. There are enough officers or non-commissioned officers of artillery to command them intelligently.

III

FORM OF ATTACK ¹

To create a complete gap, it is necessary:

(a) *To take the first line of the hostile defense (zone of the first trenches and centers of resistance);*

(b) *To take the second line of defense;*

(c) *To prevent the enemy from reestablishing a barrier by the aid of reinforcements brought up in haste beyond the zone already fortified.*

To overcome successively these difficulties, one must have:

(a) A first line of attack composed of several waves of assault with (as an element of preparation) a formidable artillery (field, heavy, and torpedo guns) minutely regulated.

(b) A second line of attack as strong as the first, except perhaps in front of the centers of resistance, sent straight to the front all

¹ See Plate I.

in one piece exactly like the first line. The same precise and effective artillery preparation is not here present, but it is compensated for by groups of light guns and machine guns destined rapidly to destroy all resistance. Accompanying batteries (*batteries d'accompagnement*) start as soon as the first trenches are taken.

(c) A reserve without initial assignment, destined to reinforce any point and conquer any irreducible or hindering resistance. This reserve is entirely at the disposition of the superior commander, while the first and second lines are no longer in his hands after they are in their parallel of departure. On the 9th of May this reserve was made up of the troops which should have normally composed the second line of attack, which did not exist. This explains the disastrous delay of its engagement, which was furthermore very hesitating, because it tried to maneuver before having broken through and waited for the *mêlée* to clear away in order to maneuver.

(d) Cavalry, auto-cannon, auto-machine guns, battalions of infantry on automobiles with pioneer crews to clear the roads.—Large units, ready to commence new combats, capable of being brought up within

two or three hours.—*Do not, after the hole has been pierced, depend any longer upon the regiments who made it.*

RÔLE OF THE FIRST LINE¹

Its Method of Action

The first line is composed of two or three waves. The features of the assault vary according to the distance to be crossed in getting at the enemy.

Distance Less than 100 Meters.—The first wave, composed of entire companies in line, the men at half-pace interval, rushes to the assault without pause as soon as the artillery fire ceases. It should endeavor to reach the enemy before he can get out of his shelters. It does not generally have to fire, except perhaps at the last moment to cross the entanglement if the enemy opens fire (see second case).

Distance Greater than 100 Meters.—Attack by waves of companies, in which those in front are divided into two parts:

1. A line of skirmishers at 5 paces, formed either by one section deployed or by groups of skirmishers furnished by each section (calm and resolute men).

¹ See Plate III.

2. Fifty meters behind comes the line of attack, men in one rank, elbow to elbow or at one pace; the company and section ¹ commanders in front of the line, four meters behind the line of attack, the rank formed by the file closers.

In this case, one cannot count on surprising the enemy; he will open a more or less violent fire, especially during the crossing of the wire entanglement. It is very illusory to imagine that any company is stoical enough to allow itself to be fired on at point blank without replying when it distinctly sees the enemy; it will be necessary to open fire, and this will throw the assaulting line into disorder.

The thin line of skirmishers is intended to give this protection by fire in order that the line of attack may keep its elbow-to-elbow formation without firing until almost the last.

At Neuville-Saint-Vaast, I was obliged personally to act as a skirmisher, and I have since then strongly felt that something was lacking in our line of attack. We arrived at the first entanglement at 80 meters from the enemy without firing, but there on

¹ The French company has four sections, but no platoons except for administration.—TRANSLATOR.

account of the violence of the adverse fire, our fusillade broke out. I myself recall that I marched straight ahead under the protection of my rifle. Every time a "flat cap" raised up and aimed at me, I threw the rifle to my shoulder rapidly; my shot came near enough to make him duck; I profited by this short respite to advance into the wire or dash ahead some 20 meters, always watching and firing whenever a "flat cap" reappeared. Thus, emptying the magazine on the march, I was able to mount the parapet of the German trench without having permitted the enemy to fire a single aimed shot at me. If the man who marches unprotected in the spaces swept by bullets scorns the danger, the one who is sheltered is inclined to exaggerate toward the side of protection, and the men who are in the trenches when the bullets pass cannot keep from instinctively ducking. It is a sensation which the attack should take advantage of.

The skirmishers should be calm and resolute men, and good shots (often old reserve soldiers, well seasoned and less susceptible of losing their nerve and intent upon preserving their own lives).

They should each march upon a particular

point of the hostile trench and watch it closely. They open fire only when they get the order from the company commander marching between the two echelons.

This manner of making the assault strongly resembles that brought out by De Wet in "Three Years of War." It is the individual assault where each soldier shows himself as a real fighter.

The March on the Line of Attack.—Each echelon starts out successively at a single bound and moves at a walk (even in cadence, if it were possible). It is curious to observe how much this pace conduces to cold resolution and fierce scorn of the adversary. At Neuville, *all units instinctively started at a walk*. Afterwards take the double time at slow cadence, in order to maintain the cohesion; make several rushes, if necessary, of 80 to 100 meters. They should not be multiplied, at the risk of breaking the *élan*.

When a great effort has been made to scorn the fire of the adversary, it should not be destroyed by a change to an attitude signifying fear.

At 60 meters from the enemy, break into charge.

The Alignment.—To march in line is a

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capital point, the importance of which one must have experienced in tragic moments to tell how prodigious is its influence. Moreover, the march in line is as old as war itself. The alignment holds each in his place, carries along those who hesitate, holds back the enthusiasts, and gives to everyone the warm and irresistible feeling of mutual confidence. At Neuville, we marched at first at a walk, then at a slow double time, aligned as on parade. I constantly heard behind me through the rattling of the machine guns, the epic, splendid shout of supreme encouragement running all along the line, "Keep in line! Keep in line!" down to the humble reservist, C, who in spite of the bullets making gaps all about in the ranks, kept all of his young and agitated comrades on the line.

Thus rushing like a wall, we were irresistible.

Crossing the Wire Entanglements.—From the moment the entanglement is reached, the period of charge and individual combat begins. The men can no longer be kept from firing; each one tries to protect himself with his own rifle.

At Neuville, we arrived at a first entanglement at 80 meters from the trenches almost

in line and without firing. At the entanglement we lay down, and fire was opened; each one crossed the entanglement individually, lay down on the other side, and recommenced firing. The line reformed without interruption of fire. I then wished to cease firing in order to charge, but they did not hear me. Then I stood up, ran alone toward the enemy, and seeing me thus, the company immediately arose and dashed across the second entanglement.

Taking the Other Trenches.—The first trench taken, it should be cleaned out, not a man capable of doing harm should be left behind; it will not do to leave to others, for instance to the grenadiers, the task of destroying those who can still harm us. At Neuville, we crossed the first trench in one rush and marched on without stopping; it was then that we were shot at from behind and obliged to turn back to massacre them all.

The first trench conquered, the line should be reformed lying down ten meters beyond the trench. Each man arriving on this new line should open fire against the defenders of the second trench. When the line is reformed, it should start the attack again as before.

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The following trenches are crossed without interruption, always advancing.

For the first wave, *there is no limit*; let it go through as far as possible. On the 9th of May, the first line ran without stopping as far as the cemetery of Neuville, La Folie Woods, and the first houses of Souchez.

The second wave should start forward at the moment the first line reaches the hostile trenches. If it starts sooner, it will unite with the first at the entanglement and be involved in the fight for the first trench; it will be broken up prematurely, and from the moment that it is no longer a separate mass it cannot be considered as a reinforcement.

While the first wave drives straight ahead, and can do nothing against the surprises of the enemy, the second and third waves, warned by what happens to the first one, can thus take certain precautions without diminishing their *élan*, such as obliquing the sections that would be exposed to the fire of machine guns not yet out of action.

The reinforcement by successive waves of entire companies leads to a vexatious mixture of units. It is necessary that the surviving officers and noncommissioned

officers group around them men of their own company but not miscellaneous units.

Instruction of the First Line

The assault being the most severe phase of the combat, it is necessary, in order to face it and push it through, that the will of each individual be transformed largely by habits and reflexes. Therefore, hold each day an assault exercise over ground which resembles in detail that over which the real assault will have to be made.

The points which should be borne in mind are as follows:

The Alignment.—Be particularly strict on this question; its extreme importance is recognized. See that the line is extremely well dressed during the execution of the rushes.

The Charge.—The company, kept in line, is thus led to a short distance from the enemy and there released. Then all together along the whole line, lower the bayonets to the height of the waist; this has an extremely impressive effect.

The charge should be frenzied and furious, and this the men should well understand.

The File Closers.—The file closers should form a rank four meters behind the line,

repeating the commands, watching especially the alignment, and maintaining each man in his place by calling to him by name. One can hardly realize the effectiveness of these personal observations in the midst of the bullets. We have no file closers; our non-commissioned officers have a general tendency to run out in front like the bravest soldiers to get into the individual fight, forgetting their men; their training and duties as file closers should receive constant attention during the exercises in the assault.

Taking the Next Trenches.—Pursuit over Free Ground.—Generally in assaulting exercises, everything stops after the first trench is taken; everyone is out of breath, and only a few men here and there, generally non-commissioned officers, try to push on shouting, but soon, being absolutely alone, they have to lie down panting and spent. This is always what happens in our battalion exercises.

The exercise means nothing unless there is impressed on the mind of everyone the deep-rooted idea of routing all the defenders in one sweep. Each man should know that after having crossed the first trench, he should go on a few paces, lie down, open fire

on the hostile groups who occupy the second trench, then get ready to start forward as before, and charge again with the same vigor in spite of fatigue.

We always did this in our exercises, and it was done the same way on the 9th of May. I know men who were shot in the back by German wounded after having crossed the first trench to reform beyond it as had been prescribed. In spite of frightful gaps, a line of men kneeling was, however, reformed, beyond the conquered trench and by its fire drove the defenders of the second trench back into their holes.

As long as there remains a trench to conquer, *prohibit absolutely all advance through the boyaux* (communicating trenches) always reform in line. But the trenches having been taken, the zone of open ground is reached where the enemy will try to re-establish some resistance here and there; it will be necessary to advance with more precaution *and to try and creep through inside his lines and throw him into disorder by surprise*. Form in each section patrols, each one having at least one noncommissioned officer; they should be trained to start out spontaneously as soon as the defenses of the enemy have been passed,

and to spread out in front of the company, trying to creep through the *boyaux* to get possession of important points without being seen. These patrols, equipped with revolvers and grenades, should be practiced in exercises involving combats in *boyaux*.

Skirmish Formation.—In close combat, men fight much more by shooting at point blank and very often from the hip than with the bayonet. The man should therefore be trained to use his rifle in close fighting.

First teach him to watch that part of the parapet and the loopholes on which he marches in order to forestall the shots of the enemy; then to aim rapidly, throwing the piece to the shoulder to get the first shot at the enemy who is aiming at him; begin by bringing up the piece and aiming slowly, and then increase the rapidity of movement; the man should observe each time where his line of sight strikes. He should have his magazine filled for hand-to-hand fighting and know how to refill it lying down or while running. Thanks to this precaution, after having emptied my magazine at the first entanglement, I was able to hold my own with full magazine against three Germans who got in my way.

RÔLE OF THE SECOND LINE, THE "REINFORCEMENTS" ¹*Its Method of Action*

The most important question concerning the penetration of the enemy's line is perhaps the action of the reinforcements (*renforts*), and as that action has always fallen short, we have never been able to attain the victory which has seemed so nearly within our reach.

The inertia of the second line and its expenditure without effect arise from two causes.

To take the first trenches is a task relatively easy; the artillery preparation is minutely regulated; the terrain is well known, and the attack is therefore free and open and is pushed through without reservation. But when the first lines have been crossed, one enters thenceforth into the domain of the unknown, one is on the lookout for ambushes and apprehends an unexpected trap at each step; this disquietude

¹ The word reinforcement (*renforts*) is defective for designating the second line, but it is the current and popular word that is used among the troops to designate whatever comes after the first line of attack.—See Plate IV at end of this article.

slows up the march and quickly transforms into a surprise the least activity of the enemy. A resistance which starts up suddenly intimidates and paralyzes the second line immediately, because the fear of the enemy leads to exaggeration of his strength and the mental disturbance prevents locating and estimating him rapidly. In addition, the reinforcements have during long hours of waiting been subjected to a very demoralizing artillery fire.

All these causes so influence the second line that when it goes into action, it attacks without spirit and soon stops.

The second cause arises, as I have previously mentioned, from a faulty conception of the action of the second line.

In place of having a second line of attack analogous to the first, coming into the fight in one body and marching straight on to the assigned objectives, the superior commander uses these troops as reinforcements, which he throws in at the point where he judges their employment necessary. *Now it is impossible for this commander to see clearly in the mêlée, he must wait a long time for the situation to unravel, and as it is necessary for him to be properly informed to send in his reinforcements opportunely, they always*

arrive too late. Having generally received orders which are ill defined and not having been able to prepare beforehand for the rôle that falls to them, their attitude is necessarily weak and hesitating.¹

It is absolutely necessary to keep pushing on in a brutal, preconceived, and almost unintelligent manner until the last link is broken, otherwise hostile reinforcements will suddenly arrive and shatter the supreme effort.

Choice of Troops for the Second Line.— This line being subject to the severe trial of bombardment and of the rifle fire directed

¹ The author's language may not be clear, but the point he wishes to bring out is that the first line of attack, consisting of several waves, will be entirely occupied in taking the first zone of defense; then and not until this is almost accomplished will the second line, complete in itself, like the first line assault over the same ground, each unit as in the first line having a prearranged objective; this second line not to be used by the superior commander for any but the preconceived program. Behind this second are held as reserve other bodies of troops under the direct orders of the superior commander for employment against any resistance that the first and second lines have failed to take. Behind all this are the general reserves, several hours in rear, ready to march through the breach to the pursuit and to new battlefields beyond.—
TRANSLATOR.

on the first line sweeping the ground behind, and being obliged to act with as much decision as the troops of the first line, it should be particularly well officered and be composed of troops of excellent spirit; now it often happens that less reliable troops are placed in this line, and far from pushing the first line forward, they stop short of it.

Location of the Troops of the Second Line. The Moment for Putting Them into Action.—During the preparation, the troops of the second line wait their turn in the shelters which open into the approach *boyaux*. It would be very advantageous if they could be placed as close as possible to the parallel of departure¹ in order to profit from the more or less complete protection against

¹ When an attack is planned, numerous saps are run out to the front from the main firing trenches. The night before the attack, a parallel is broken out connecting the sap heads, and this parallel is amply provided with short ladders. Just before the artillery preparation is to cease, this parallel is filled with the companies detailed for the assault, and as the artillery ceases the waves rush in succession up the ladders and to the front. Thus the name parallel of departure. Of course, to provide for the successive waves, not only the parallel, but the saps and the main trenches are filled with men who move up into the parallel as fast as room is made.—TRANSLATOR.

hostile artillery fire which comes from being close to the hostile trenches; but in general this will not be possible, except where the German and French trenches are separated by a considerable distance; in this case, there will be enough space between the parallel of departure and the old trench to install several support trenches.

When the first line has entirely departed, the units of the second line take their place in the parallel of departure and form there. *While not waiting there too long, it is absolutely necessary that the second-line troops entirely separate their effort from the effort of the troops preceding them.* They should start forward when the latter have almost taken the first zone of defense. A premature departure would mix their action with that of the first waves, and they would be absorbed in the same combat. Thus prematurely consumed and broken up, they would be incapable of continuing their action and would add nothing to the effort of the preceding troops.

Taking the Formation for Combat.—The units of the second line should take their combat formation from the parallel of departure and from there be oriented on a well fixed objective; in fact, they risk coming

unexpectedly under fire and should be ready for it at any time. There is, moreover, a reason of a moral order for it, which has been very often tested out. When taking the formation for combat, that is to say, when getting ready to fight the enemy before even having seen him, it seems that each one becomes imbued with a cold and silent resolution, which is alone irresistible. Taking formation under the pressure of danger, however, seems more like a check, and there comes out of it a demoralizing sensation of sudden fear and disorder.

Formation.—The conditions which the formation should fulfill are the following: to be supple in order to adapt itself immediately to the exigencies of the situation; to be as invulnerable as possible so that it may escape the effects of a sudden destructive fire.

For a company, the formation seems to be that of two lines about 150 meters apart, the skirmishers three or four paces apart, the company commander marching between the two lines so that he can see what the first line sees without being entirely involved in its combat.

The march has been generally conducted in small columns at deploying intervals, as

it seems that this formation is the more supple and permits of a better utilization of the terrain. This is true only in time of peace, but in war one must deploy a long time before the bullets arrive.

March and Use of Ground.—Each company marches *at a walk* straight toward its objective and *in line* as long as it is not subjected to direct fire; it thus avoids the irregularities which arise from the anxiety to make use of the ground, when from now on, only one anxiety should prevail, that of routing the enemy.

There is generally a tendency to try to make use of the hostile *boyaux* and trenches as lines of advance. Even if they should permit approach by surprise and without loss, they divide up the company and break the formations for attack; furthermore, an extraordinary difficulty is experienced in leaving them when the bullets whistle and the moment comes for getting out on the open field.

I shall always remember Fonquevillers, where I persisted in following with my company a narrow approach which brought me near the enemy, and I know that we had much trouble in leaving it. I have often thought since that it would have been pref-

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erable to take a combat position in a hollow road a little further to the rear parallel to the enemy's front, at 400 meters.

Combat of Units of the Second Line.—The units of the first line, having made their effort, have been finally stopped on the whole front by a series of resistances. The troops of the second line have received as their mission only the two following objects:

To master a well-defined zone up to a certain point;

To master the borders of a center of resistance on the flank of troops that have pushed into the intervals.

Eventually they may at certain points receive the order to throw back a counter-offensive and to pursue.

When the troop of the second line arrive in the proximity of the troops of the first line who have been stopped, there should be no idea of maneuvering nor of consultation, but as in the case of the first enemy trench, they must carry through *the assault without hesitation*.

Two cases are presented according to the distance that separates the fractions of the halted first line from the hostile resistance:

1. Distance less than 200 meters:

If the stopped first line can maintain itself

at the limit of its progression, it is generally not in an open field. Its line will serve as a parallel of departure for the units of the second line. These units at first try to reach the line of shelter where they will be formed. Their assaulting formation results from the march formation, and the waves will be composed of half companies.

The first wave rushes out of cover at the double to at least half the distance and open fire; fire being opened, the second wave rushes *in line* and carries along the first.

Here the firing cannot be prevented, as artillery support, now faulty, has to be replaced by rifle fire, to which is joined the fire of machine guns and light cannon, which alone can make possible so fearful an assault.

2. Distance more than 200 meters—

Progression and Assault:

/ The new difficulty is to build up at assaulting distance from the enemy a line of assault in a sort of parallel of departure.

To arrive at assaulting distance, advance by thin lines formed by halving the skirmish lines already deployed; these lines, at least 100 meters apart, advance successively by alternate rushes, then unite on the line designated as the starting point for the assault.

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A natural parallel of departure may exist or may partially exist, or it may not exist at all. In the second case, the line of shelters must be adapted, and in the third case it must be created in order to be able to stay a few moments at a short distance from the enemy without being destroyed. To facilitate this extremely difficult and dangerous construction, it is a good thing to have each man fill a sand bag at the last shelter and put in some stones, which, while not bulky, stops the bullets. Each man makes his rushes with his sand bag, which protects him partially during the halts. Having reached the line fixed upon for the parallel, this sand bag serves him as a cover, which he has only to complete rapidly. Each man then enlarged his shelter so as to accommodate near comrades.

The first wave, reformed at the assau'ting distance, makes the assault as before. At times, the losses and the confusion of units may lead to an assault by entire companies.

The second and third waves follow and imitate the movements of the first.

Machine Guns and Light Cannon

The artillery can only give the second line a support which is often partial and not very effective; its action must be replaced at whatever cost by other means, such as machine guns for sweeping the hostile firing line and light cannon to instantly destroy the hostile machine guns.

Location of the Machine-Gun and Gun Crews during the Assault.—These detachments follow the last waves of the first line, and they therefore are not directly taken under fire and can profit by the indications of the fight of the first line and so be in a way to act effectively when the second line comes into action.

Machine Guns.—The machine gun is an element of attack and the most terrible arm of close fighting. However, it is employed in the attack only to man the positions taken or to support the infantry elements from a distance. This is nonsense: to give it such a rôle, one could never have trembled with rage and impotence at a few paces from the enemy, whom he could not get at.

The machine gun should be pushed as far as possible in front of the halted line of fire. If it remains behind or abreast of the

fighting line, its field of fire is generally blocked or masked by the slightest movement; in advance of the line, it will enable the infantry line to advance for some time under the cover of its fire; it is the tooth of the attack. It can move forward, its crew of a few men can creep along the smallest pathway, and a shell hole is sufficient for its shelter; in the skirmish chain a whole ditch is necessary. Will it lack ammunition, having only the boxes that the gun crew carries sometimes incomplete? No, for it has only to fire on rare occasions, for example, at the moment of assault. If it is taken, what does that matter—we will take ten from the enemy. The problem would be much simplified *with a few automatic rifles*.

Light Cannon.—We have spoken of the rôle of light cannon in the paragraph relating to the destruction of machine guns.

Instruction of Units of the Second Line

This instruction proposes to create the reflex of immediately attacking all resistance that appears and of developing presence of mind by inventing sudden incidents requiring the taking of a rapid decision. In

a word, to add a spirit of prompt decision in the troops of the second line to the irresistible *élan* which one tries to develop in all assaulting troops.

The troops of the second line when facing a resistance should have only one idea: to assault as soon as possible and for that purpose to try to bring about the two following conditions:

To create a sort of parallel of departure at assaulting distance;

To obtain superiority of fire by all means at their disposal.

We will study by means of examples the two preceding cases cited. Troops of the second line should know them by heart, because all cases resemble them more or less.

First Case.—We reach the first line, halted under cover at 150 meters from the enemy; this is a case of organizing a long-distance assault.

Attention should be focussed on the following points:

1. Re-establishment of Order and Calm.

The line of cover is an extemporized parallel, the men are crowded into uncomfortable positions, several units are mixed. These are conditions likely to create disorder, the worst enemy of the assault. Think well

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as long as you are under cover because amid the bullets you march straight ahead without thinking. Transmit simple indications from man to man and orders to the chiefs of section by note.

Have all cease firing except the best shots; firing unnerves and distracts the noncommissioned officers and soldiers. On the contrary, silence is at once a mark of order, it impresses the men who collect themselves and make the appeal for a supreme resolution to their inner selves.

2. Gaining Superiority of Fire.

It can be obtained in the two following ways:

The execution of an intense fire by the whole line;

The execution of a slow, deadly, and precise fire by the best shots, well concealed.

The men are under cover, consequently it is possible to avoid the first plan, which is noisy and not particularly effective but which circumstances beyond our control sometimes make necessary.

The best shots are designated by the chiefs of section. They construct masks in front of themselves, behind which they fire obliquely, that is to say, under excellent conditions of security and calm. They

locate an adversary, keep aiming at him and firing each time that he appears, and they go successively from right to left. This method is very effective; the enemy does not dare to fire any more, and it soon seems as if his trench were empty.

In addition, if possible, get a small group to the front or on the flank, who will protect a forward movement by their fire.

3. Execution of the Assault:

"The first and second sections will move out under command of Lieutenant X and will make a rush of 80 meters. Open fire after the rush."

The movement should be simultaneous and without warning to the enemy; the following suggestions are made:

"Prepare to rush, look toward Lieutenant X, hide your bayonets."

The movement having been executed by the first echelon and fire opened, the second echelon rushes in its turn, aligned at a quick pace, then at double time, and carries along the first.

From the moment of the charge, each man rushes on the enemy and fires if necessary.

Second Case.—The units of the first line have been stopped at more than 200 meters from the enemy, say at 500 meters.

Move forward, executing short, rapid rushes without firing, in thin lines which are united at assaulting distance from the enemy.

The formation of successive lines for rushing is extremely simple. The company having arrived at a sheltered line beyond which extends an open space, the company commander commands:

"In thin lines by half section, at 100 meters distance by short rushes: 1st and 3d Sections, forward."

He personally goes out with the first line to select the emplacement where he will halt it.

Each of the 1st and 3d Sections sends out two squads (1, 3, 9, 11). The men immediately take 6-pace intervals. This forms the first line, which is followed by a second, and so on, the rushes of each line alternating with those of the preceding one.

The construction of the parallel of departure is accomplished as has been indicated above.

Instruction of the Machine-Gun Sections

The machine-gun sections should participate in the exercises with the infantry.

They should be accustomed to grasp the idea of the situation rapidly and to replace the fire of the attacking infantry either by taking a position in rear or on the flanks which will permit them to fire up to the end of the action without being hindered by the movement to the front, or by going squarely out in advance of the halted line.

This last case should be particularly studied; the Germans have shown it to us, and it is therefore possible; I know that it is very effective (25th of August at Crevic).

Therefore train them to get used to picking out cover, however insignificant, as a position for a machine gun and to utilize the ground skillfully and rush rapidly with the matériel in order to make themselves invisible or indiscernible;

To arrange shelter rapidly, to create a mask in front, and arrange for oblique fire, in order that the personnel may not be rapidly destroyed;

To keep still and try to be forgotten until the moment of assault.

The crews of the light guns should be attached to the infantry and learn to co-operate with it instead of being independent.

*Exercises to Develop the Spirit of Decision
in the Second Line.*

In front of any resistance whatever, the units of the second line should have but two ideas:

To take positions rapidly for the assault;
To assault.

The dispositions for the assault are:

The creation or adaptation of a line of a shelter at assaulting distance;

The rapid gaining of superiority of fire.

All the work of maneuver is reduced to the realization of these two ideas. It is a question of applying in slightly varying circumstances the two classic studies above indicated, and one should know them perfectly.

To develop presence of mind in the non-commissioned officers and suppleness in the organization, situations analogous to those formerly used on the drill ground, such as "Cavalry to the right—in rear" should be devised.

Choose a parallel of departure and have the troops of the second line take their formation and march on the objectives designated in advance. Suddenly call out, "Enemy resistance on such a line, our

first elements are stopped at such a point . . . hostile machine guns in such a region." Then everybody, infantry, machine guns, light cannon, instantly take up their dispositions.

By representing the enemy and having him fire blank cartridges, one becomes accustomed to making rapid reconnaissance of resistances.

IV

PREPARATION OF THE TROOPS FOR PENETRATION

THE battle of to-day, since the last evolution of the war, is only a succession of assaults. The assaults being the hardest and most murderous phase of the combat, before which the attack generally breaks down, we should only undertake it with assaulting troops. All troops are far from being assaulting troops; they need a well-established cohesion and a special training.

In nine months of campaign, I have only twice had a company really capable of delivering the assault: that of the active regiment, which was eager to charge at whatever cost at Morhange, and that of Neuville-Saint-Vaast, toward which during the assault, I turned but twice—when we started and when I fell.

THE COHESION

In order that an organization may be capable of reaching the enemy, it is necessary for each man to be thoroughly con-

vinced that his neighbor will march at his side and not abandon him; he should not have to turn around to see whether his comrade is coming. This requires a solidly established cohesion. Cohesion is very difficult to obtain with the continual renewal of men and noncommissioned officers; to cement it well, the men must have lived long together and have borne the same hardships during which are strengthened the sentiments of solidarity and affection which create in the company invisible bonds, stronger than all discipline and the only ones capable of resisting the fierce egoism of the battlefield.

The company must also have been tried out by experiences severe enough for everyone to be able to estimate what his leaders and neighbors are worth under circumstances where borrowed masks fall off. Thus habit, friendship, and confidence make no difference in the appearance of a company; it is the battle alone that unveils these qualities in their full staunchness and value.

The company of the 9th of May had been in existence at least four months—that is, the last considerable reinforcements had been present about four months. We had indeed received newer recruits, but they

were not sufficient to change the spirit of the company. We had lived in the Belgian trench where the material side of the situation could not have been more miserable. Without having suffered serious losses, we had been at times very roughly used, so that all the men had an idea of the trials of war.

Thus trench life is an excellent school for cohesion, but a company which moves forward directly from trench life would not be capable of attacking as we should like. Trench life is deteriorating and destroys in the mind of the man the idea that he belongs to a unit, to an organization. It should be completed by a period of exercises.

During the period of exercises, the work should be toward cohesion by establishing an exact discipline, difficult to obtain in the trenches, by punctually requiring the marks of respect, and by paying close attention to the uniform and personal appearance. All these details have a prime moral importance; nothing is more demoralizing for the soldier than to see around him his comrades badly dressed and negligent in their duty; he evidently finds at times that this is more convenient but at heart he lacks confidence because he well knows

that in this troop of Bohemians, without faith or order, everyone will go his own way in the moment of danger. The daily aspect of a company, carefully uniformed and well disciplined, gives him, on the contrary, a feeling of reassurance and confidence.

“ . . . Mais par un prompt renfort

Nous nous vîmes trois mille en arrivant
au port

Tant à nous voir marcher en *si bel équipage*
Les plus épouvantés reprenaient de courage.”

This is what our battalion commander often quoted to us.

Combat exercises by entire units, close-order drill, and passing in review which should always close an exercise session, contribute to develop the sentiment, which becomes blunted in the trenches, that the soldier belongs to a unit, compact and articulate.

The trench produces cohesion in the *small group*, the period of exercise the *cohesion in the organization*.

THE OFFENSIVE SPIRIT

In order to rush headlong at the enemy out in the open, where at any moment shot

and shell may do its worst, one must have an exuberance of energy. This increase of courage exists only among troops who have for a long time been able to accumulate reserves of moral force. A unit that has recently made a bloody effort is incapable of delivering a *furious and unlimited assault*, such as we wish for. It might with trouble take a line of trenches and there hastily take cover. The supply of energy is used up quickly and comes back very slowly; the memory of the terrible dangers must be dulled. In a combat, the expenditure of energy is at once physical and nervous, but rather nervous than physical. Now the mistake is often made of thinking that an organization is in fighting condition when it has again taken on a good appearance and seems in excellent form. A few nights of sleep and a few days of good food are sufficient to restore the physique, but the nerve cells are reformed with all the slowness that is characteristic of them. How many times, some days after bloody fights which have left me weak and emaciated, have I found myself in a state of flourishing health almost shameful for a soldier, and felt at the same time a faltering courage at heart!

To try to attack with troops already dejected or insufficiently recovered is to march to meet a certain and bloody defeat. It is sufficient to see the troops with which the attempts to break through at Neuville in the month of June were made and their result, known in advance by the discouraged officers. The almost destroyed regiments that had made the magnificent attacks of May 9th and had occupied the conquered ground under the worst bombardments until the 25th, had been reorganized with dispirited officers and noncommissioned officers, and were the sorriest soldiers that one could see—men recalled after having been formerly rejected, incompletely instructed, and of rather mediocre spirit. The few survivors of the splendid days of May, instead of being exalted by the memory of these exploits, had retained the memory of the massacre which had left them almost alone among their former officers and two hundred comrades. Two weeks rest and a new attack with the painful result which covered the famous regiments with unmerited shame; companies hesitating to leave their trenches, officers obliged to drive their men, the slaughter of abandoned noncommissioned officers.

and shell may do its worst, in an exuberance of energy. The courage exists only among troops for a long time been able to draw reserves of moral force. A unit that recently made a bloody effort of delivering a *furious* and *valorous* attack such as we wish for. It may take a line of trenches and take cover. The supply comes up quickly and comes back to the memory of the terrible battle dulled. In a combat, the energy is at once physical but rather nervous than the mistake is often made. An organization is in a state when it has again taken place and seems in exhaustion, nights of sleep and a few days are sufficient to restore the nerve cells and the slowness that is the result. How many times have the fights which have been stated, have the troops flourishing and the soldier, and the courage at

To try to speak to the men who will meet their
 jected or ~~in~~ with simplicity and conviction, has
 to meet a ~~and~~ and decisive influence on the
 sufficient ~~to~~ mass of infantrymen. Hand-
 attempts ~~to~~ was formerly the greatest ac-
 in the ~~management~~ of commanders, who did not
 result, ~~in~~ themselves to the brief and abstract
 officers. ~~as~~ of their orders. *To-day as for-*
that had the word of the great chief, rational
May be assured, is graven in ineffaceable letters
ground in the hearts of the combatants. Beyond the
 the ~~25th~~, the soldier clearly sees his native
 spirit ~~of~~ try, whose supreme will still claims the
 fier ~~and~~ office, and in himself he feels his courage
 one ~~and~~ den.

been ~~in~~ toward the 15th of April, returning from
 str ~~in~~ Belgium, our regiment passed in review be-
 The ~~in~~ General F, our former Corps Com-
 Man ~~and~~ der, who assembled the officers and said
 to them: "We are going to attempt another
 maneuver . . . , the waiting has come to
 an end, we are going after them . . . ,
 we have to-day cannon and ammunition
 in abundance, we will crush their shelters,
 we will destroy their machine guns. . . .
 when the infantry will be launched and
 all crush them; after the first ones, there
 will be others . . . , then others . . . ; if
 we do not succeed, we shall have no one to

blame but ourselves." These words sank into the hearts of the company officers, and they repeated them with conviction to their soldiers, and the latter heard them so well that they surpassed all that could have been expected; they are not the ones whom General F might blame.

Thus the troops see clearly the object, but the moral preparation would be insufficient if the man felt himself incapable of accomplishing it. Each day the officers should instil in the troops the idea of the effort and show them how it may be realized; there are even questions concerning the instinct of preservation that it is well to bring into play. Thus instead of fearing the ordeal, the man little by little gets accustomed to the idea of facing it.

It remains now to complete and exalt the offensive spirit by an intense period of appropriate exercises. Trench life has a tendency to kill the offensive spirit of the troops. They think only of protecting themselves, they are always under cover, they circulate in the *boyaux*, and all this creates a horror of the open ground. Daily experiences, such as not being able to show one's head without running the risk of receiving a bullet in the face, create a very acute sensation of

danger. They dare no longer stir, and to attack the terrible trenches of the enemy which one cannot look at even for a second seems a mad and unrealizable project. The service in the trenches creates terror of the hostile trench.

The Man Must Be Put into Forward Movement

Make him run, jump, and rush in the open spaces; let him get intoxicated with air and movement; the attitude creates the mentality. As soon as he has lost the habit of hanging his head and hunching his back, he has also lost his exaggerated prudence and the fear of unsheltered spaces.

At the cantonments at Fiefs and Berles, where we passed a fortnight before the 9th of May, the afternoons were entirely given up to sport. We organized "field days" in the woods, obstacle races, and the men, recruits and old reservists, galloped through these spring days with absolutely unbounded animation. To give the men the habit of moving without anxiety over open ground where the bullets whistled, I took advantage of the nights when we were working on saps and parallels to make them march in patrols a short distance in front of

the lines. If I saw that the workmen were thinking of crouching down, I made them stand up for a while; as for me, I fortified myself by walking up and down in front of the working party.

We wished for an irresistible assault and therefore tried to inculcate in the men the instinct of hand-to-hand fighting, at which they ordinarily hesitate with the result that the close combat is stopped for days and months at a few score meters from the enemy. We had bayonet fencing, but it was a demoniacal fencing, the fencing of the chargers of Froeschwiller.

The fencing exercises, carried out by the company to prepare for the attack, were as follows: first, a brief review of the movements, then immediately fencing on the run; the men were formed at a few paces intervals and then started on a run; it was "Halt! Thrust! Thrust again!" They started again, climbed the embankments, lunged and relunged furiously; they got winded, so much the worse. . . . "Right face!" and everyone ran to the right, descended the slope stabbing, and stabbing again, getting excited and feverish, the officers and sergeants galloping more furiously than the rest.

Afterwards fencing with the dummy. We had stuffed sacks full of straw and made them smaller each day to make a smaller target and oblige the men to be more accurate in their thrusts.

Each man attacked the dummy individually, shouting with all the frenzy of which his imagination was capable, and those who attacked the best, with the greasiest *élan* went over it again to show their comrade how to do it. It was no play; they knew enough of the Germans to believe them in front of them, and I recall that among those from Gascony, Toulouse, and Provence, who formed the basis of the company, some shouted with frenzy, "Piquo, Piquo!"

In order to give more movement, the exercise against the dummy was arranged in the following manner:

In a quite tangled wood, we established obstacles by cutting down bushes over a course of 80 meters. Then here and there we placed the dummies. Thus on a fairly short course the man was obliged to run, jump, bend down, attack, and this in every manner, for we placed the dummies in such a way that the man had to combine his attack with right face, left face, face to the rear, or with crossing an obstacle. This

exercise particularly interested the men, and as we measured the time taken by each one to run the course, in a few days it had developed in an astonishing manner their agility and suppleness, and gave nerve to those who had none. I know that as concerns myself the knowledge of having covered the course in the shortest time, in addition to other experiences, contributed greatly to developing my confidence in my vigor and my good legs, which were the most precious of my offensive qualities on the 9th of May.

Afterwards we attacked in groups and then passed to charges by section. Here we sought, while giving the greatest impulsion and fury possible, to maintain cohesion and give to each one the confidence of the touch of elbows, and to the enemy the terrifying impression of a wall that nothing could stop. We marched at charging pace¹ aligned, with a lengthened and furious step—not restrained and without conviction—up to 50 meters; then we charged, lowering the bayonets in a single movement to the height of the waist.

We were working to get the charge of the skirmishers and Zouaves at Froeschwiller;

¹ Thirty inches, 140 per minute.—TRANSLATOR.

now we have had it with loss of the majority of our officers over three successive trenches on two kilometers of a single rush to the cemetery of Neuville-Saint-Vaast.

V

MATERIAL PREPARATION OF THE TROOPS

THE fight does not consist in getting killed but in getting out of it by thrashing the enemy. Therefore do not go at it in a hurly-burly fashion; one should be careless only about the inevitable fatality over which one can have no influence. Let us prepare our business down to the slightest details in order to conquer and live.

KNOWLEDGE OF THE GROUND

Maps

Before the attack, the physiognomy of the terrain and of the enemy's defenses should be well impressed on the memory. The position should be known not only from the front, but in profile. This study is of the greatest importance, particularly *for the troops of the second line*, because the greatest cause of stoppage in an offensive against a fortified position is the incomplete knowl-

edge of the position. One is afraid, in advancing, of falling into an ambush. The company commanders, particularly those of the first line, should indicate to their chiefs of section the successive points of direction for their sections, so that each one will be aware of the obstacles he will have to cross. The men should likewise know the ground well. I used to require them to study the future sector of attack, giving them the principal points to watch when they went on guard in the trench.

If on the 4th of December we had known the terrain of attack before the night engagement instead of not having the slightest notion of it, we would not have awaited the dawn at the first German trench for fear of falling into a wasps' nest, and we should have taken not only the second but the third trench and made many prisoners.

Very detailed maps are distributed before the attack to company commanders and to chiefs of section, but one should try to complete them oneself by attentive and repeated observation of one's sector. Before the attack of the 9th of May, I had recopied for each noncommissioned officer the part of my map concerning the zone of

attack of the company, entering on it all known information.

Matériel

Real superiority over the enemy is obtained by superiority of weapons; courage cannot make up for destruction, one must tax one's brains to furnish the men with matériel which may be useful to them.

Grenades.—Every grenadier or member of a patrol should carry five grenades; each man should have one, not to throw himself, but so that it may be possible to get a certain number of them together in case of need. If a fight with grenades is foreseen in a region cut up with trenches or *boyaux* or in a town, the supply should be increased.

Furnish suffocating grenades, especially to patrols going into *boyaux*.

Familiarize everyone a long time beforehand, if possible, with the handling of the different grenades. On the 8th of May, I sent 5 kilometers for suffocating grenades, which I had just heard of, in order to be acquainted with the effects of this useful weapon. Have hooks prepared, fixed to the left wrist, for the purpose of lighting the friction grenades by hand.

Revolvers and knives are indispensable for the fight in the *boyaux*.

Have individual sand bags to establish a rapid barrier in the *boyaux* or to build up a line of cover such as we have before described.

Also the Filloux apparatus, with the use of which the men should be familiar.

Equipment.—Keep the lightened knapsack, which will be of service against a possible bombardment of the conquered position (lesson of Langemark, December 4). Fold the blanket on the inside of the knapsack to form a padding against fragments.

VI

DEVELOPMENT AND PHYSIOGNOMY OF THE ATTACK ¹

ACTION OF THE FIRST LINE OF ATTACK

THE artillery preparation, roaring on the horizon like a furious storm, ceases sharply, and a tragic silence falls over the field of battle. The infantry leaves its parallels in a single movement, at a walk, magnificently aligned, crowned with the scintillation of thousands of bayonets. Then the hostile trenches burst out suddenly with fire, the fusillade rattles immediately, madly, dominated by the pitiless rattling of the machine guns. The wave of assailants thins out, entire units disappear, mowed down. Some lie down and advance no further, while others, better commanded, march ahead in spite of all. Some, more favored, find themselves in places where the artillery preparation has cleared the enemy out. They reach

¹.See Plates.

the first trench, and hand-to-hand fighting commences.

The second wave arrives in its turn, avoids the zone of destruction, plunges into the parts where the resistance has weakened, and thus the first trench, split up into enveloped sections, is definitely submerged by the second wave. They form beyond the captured trench and start forward again; but it is a disorganized combat by groups in the midst of shots and bullets which cross each other in every direction. The second trench is assaulted, certain parts are conquered through which the flood of assailants spreads out while desperate groups resist stubbornly in some redoubts.

Now in the first line of attack, there is no more order, the dead cover the ground passed over, here mowed down by ranks, there hung in clusters on the wire entanglements, or forming a crown on top of the parapets, or sown here and there by the scattering of the hand-to-hand fights; the wounded flow back in numbers to the rear, isolated soldiers are scattered in all corners for the most diverse reasons; even organizations are stopped in the conquered trenches by their chiefs who find that they have done enough and that it is high time

to get out of the trouble. But beyond this immense dispersion, some heroic groups, weak nuclei of many companies, led by ardent leaders, make their way further into the hostile territory. They suddenly appear, urged into a gallop over the trenches; magnified ten times by the imagination of the enemy who loses his head, they run beyond into the open fields, receiving some shots here and there but surprised at the emptiness of the field of battle. Behind them, the combat of extermination continues in places, but nothing follows, only some groups of stragglers and wounded are returning. Then these foremost parties feel their weakness and count their numbers; the emptiness, the silence, the invisible resistance impress them, they scent the ambush and soon stop.

In front of the centers of resistance, the fight is hard and murderous; they have taken one or two trenches, carried the first houses, but the organizations are dissolved in the interminable individual fighting in the *boyaux* or ruins; here the progress has been inappreciable in spite of enormous losses.

Thus the first line has made its effort; in the centers of resistance, it has scarcely

gotten a good hold on the exterior borders; in the intervals, on the contrary, it has expanded widely like a wave which had broken through a dike at one point. But it has been stopped, out of breath, in front of the second line of defense, whose resistance is organizing, or it has been nailed to its place by flanking fire from the still unconquered centers of resistance; it is composed from now on of weak groups of real fighters, just strong enough to mark out here and there the limits of the conquered ground, and of a multitude of isolated individuals and entire units which are scattered over the whole zone of attack.

This has all lasted perhaps less than an hour.

ACTION OF THE SECOND LINE OF ATTACK

With the enemy all is disorder, the batteries flee at a gallop before the tide which has carried away all the obstacles prepared long ago and judged impregnable; all confidence disappears; the adversary, feeling his resistance giving way around him, no longer dares to hold out desperately, from now on the least thing induces him to turn tail. However, at some points reserves have come up, have manned

78 THE ATTACK IN TRENCH WARFARE

their positions of the second line, and have attempted some timid offensive returns. Machine guns, rapidly brought up, are installed and fire with utmost rapidity to prevent access to the undefended zones and to gain time. The tottering resistance tries to hold on; now, one more great brutal push along the whole front like the attack of the first line, and then will come a total rout.

It is then that the second line appears; starting out in its turn from the parallel, it advances by immense and successive waves of thin lines, calm and unshakable among the rafales of shells and random bullets.

Already numerous detachments of machine guns and light cannon have preceded it. Creeping through, following up the first line, they have been able to unravel the situation and to discern the points where the resistance tries to hold out and which must be immediately swept. The light cannon orient themselves directly on the rattling of the machine guns, which they endeavor to overwhelm with a shower of their small shells.

The "accompanying batteries" have started as soon as the first trenches are taken

and are soon oriented by the signals of the special *agents de liaison*, artillerymen who follow the infantry. The remainder of the artillery cuts off the approaches by a barrier of asphyxiating shells and carries its fire on to the second line, marked out according to the directing plan.

Thus the second line arrives close up to the advanced elements of the first line under cover of sufficient fire. The second line pushes straight to the front on the objectives fixed long before and which should claim its whole attention.

Certain of the units have a mission to blind the centers of resistance by finishing up the conquest of their exterior borders, while the great majority are absorbed in the intervals, instead of halting and exhausting themselves by playing the enemy's game in his inextricable points of support.

To quote an expression of "A Midsummer's Night's Dream," modifying it slightly: a center of resistance is a filter into which one can pour battalions and regiments, and it will yield only a few drops.

The organizations passing through the intervals arrive in front of the second line of defense, which is not generally occupied continuously. They run against lively and

sudden resistances, or *else encounter empty spaces through which they boldly penetrate*, pushing straight on always to the front without being intimidated by the silence or distracted by the resistance on the right or left. The units stopped rapidly organize the assault and attack by main force like the first waves of the attack without trying to maneuver, a temptation of weakness and indecision. Here again there is hesitation: units held up by only a semblance of resistance or trying to avoid it; others, having approached to assaulting distance, dig in and dare not go forward openly into a supreme charge; others are turned away from their objective to get into another combat, which absorbs them.

However, the second line of hostile defense finds itself in its turn disabled; broken in and considerably passed by in certain localities, vigorously assailed on all points where a resistance is hastily improvised, it is soon split up into islands and surrounded on all sides.

The points of support, as in the case of the first trench, are left to one side and merely isolated by the capture of their borders.

ACTION OF THE RESERVES

We are now nearly in open ground; we must still definitely clear away the last resistance to which the hostile reinforcements now coming up in haste would cling and soon convert into an insuperable barrier if we give them a few hours' respite.

It is for this purpose that we employ the reserves.

Informed by officers of *liaison*, who are not afraid to traverse the battlefield to find out how things are going on and who do not abandon the troops to their own resources until tardy reports come in, the superior commander directs his reserves to the precise points where they are most needed.

Thus the last resistances, which the second attacking line, occupied with marching straight ahead, was not able to encircle, are definitely shattered by the reserves.

Exploitation of the Success

Finally, we have arrived in the zone of open country, the gigantic assault of 5 or 6 kilometers is ended. Now it will be the surprise, the rapidity of movements, the

skill of maneuver which will gradually produce panic.

The enemy, pushed back, overthrown, broken through in the intervals between the points of support where he tries to hold on, will soon no longer find a position where he dare make a stand; he will be irresistibly drawn into the rout as the menacing cry "the French!" re-echoes in an infinitely increasing volume.

But it will then no longer be a question of breaking through, we must rest after the assault,

*Brigade of Infantry
ready to be engaged
at the end of 2 hours*

Cavalry.

卅 卅 卅 卅 卅 卅 卅 卅

*Bns of infantry in automobiles
with detachments of pioneers*

卅 卅 卅 卅 卅 卅 卅 卅

*Guns and machine guns
on automobiles.*

Brigade of Infantry.

Plate I.—Dispositions of The Attacking Troops on The Front of a Division.

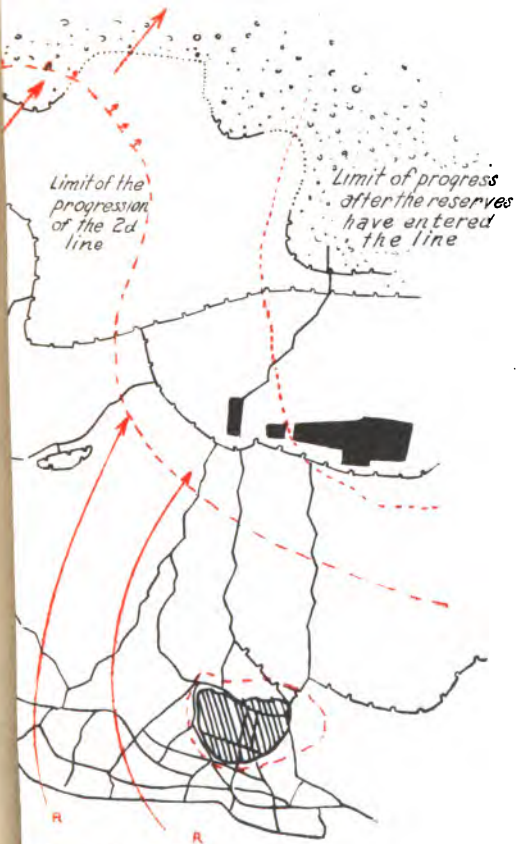




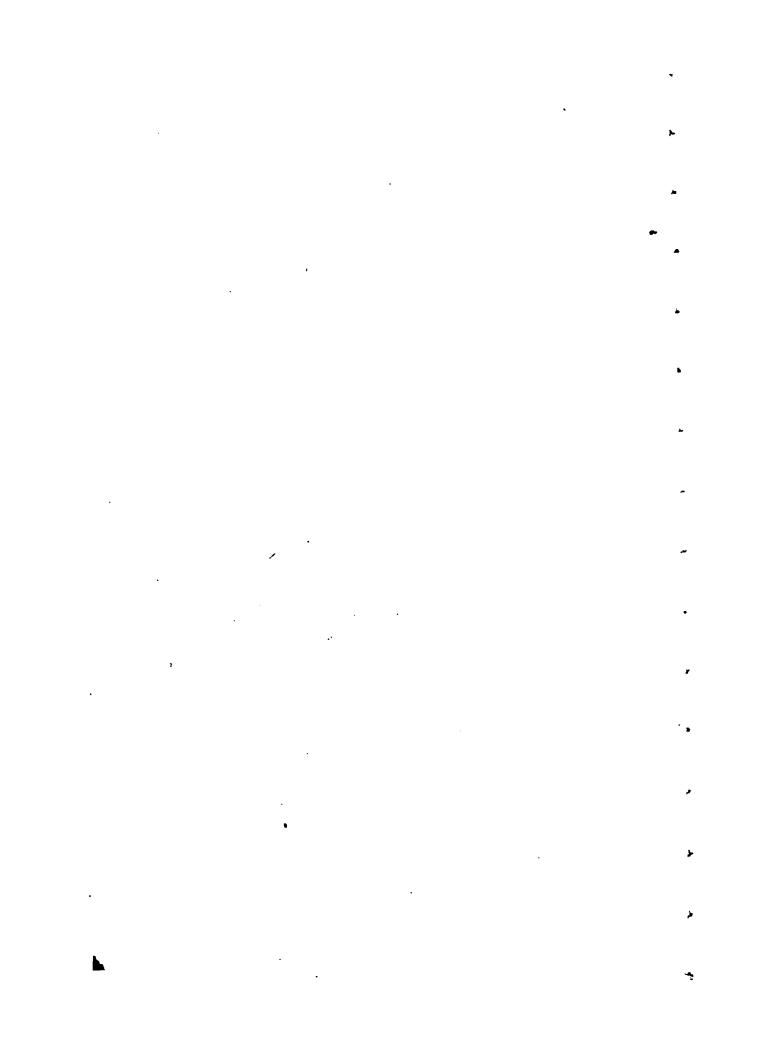


and Line of Attack.





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